

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-10 and 87-96 are currently pending. No claims have been amended herewith, and therefore no new matter has been added.

In the outstanding Office Action, Claims 1-4, 6, 7, 9, 10, 87-89, 91-94, and 96 were rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Application Publication No. 2001/0010706 to Sato et al. (hereinafter “Sato”); Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato and U.S. Patent No. 6,590,902 to Suzuki et al. (hereinafter “Suzuki”); and Claims 5, 90, and 95 were objected to as being dependent upon a rejected base claim, but was indicated to be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Applicants gratefully acknowledge the indication that Claims 5, 90, and 95 includes allowable subject matter.

Applicants’ Claim 1 is directed to an image information encoding apparatus adapted for encoding an input image signal at least including intraframe encoding image, interframe forward predictive encoding image and interframe bi-directional predictive encoding image by orthogonal transform and motion prediction and/or compensation processing to generate image compressed information, the image information encoding apparatus comprising:

a motion prediction and/or compensation unit
configured to perform motion prediction and/or compensation
processing based on different interpolation methods with
respect to the interframe forward predictive encoding image
and the interframe bi-directional predictive encoding image,

wherein the motion prediction and/or compensation unit
includes a first filter and performs motion prediction and/or
compensation processing by using the first filter with respect to
the interframe forward predictive encoding image, and includes
a second filter and performs motion prediction and/or

compensation processing by using the second filter, ***said second filter having a fewer number of taps relative to the first filter with respect to the interframe bi-directional predictive encoding image.*** [Emphasis Added.]

Claim 1 clarifies that motion prediction and/or compensation processing with respect to an interframe forward predictive encoding image is performed by using a first filter, and motion prediction and/or compensation processing with respect to an interframe bi-directional predictive encoding image is performed by using a second filter, ***the second filter having a fewer number of taps relative to the first filter.***

The Office Action associates a single twofold interpolation filter illustrated in Fig. 9B of Sato with the claimed first filter, and associates the frame prediction section (109) illustrated in Fig. 9C of Sato, with the claimed second filter.¹

Without addressing the Office Action's assertion that the interpolation in the vertical direction performed by Sato's frame prediction section (109) teaches the motion prediction and/or compensation processing performed by claimed second filter, Applicants submit that all the elements recited in Claim 1 have not been met by the 35 U.S.C. § 102(b) rejection of that claim. In particular, Applicants wish to point out that the feature regarding the second filter having a fewer number of taps relative to the first filter, as recited in Claim 1, has not been met.

Regarding a number of taps of Sato's twofold interpolation filter (i.e., the first filter), Sato simply describes that when a half-band filter is used as the twofold interpolation filter, multiplication or addition of pixel values need not be repeated as many times as the number of taps of the half-band filter.² Further, Sato describes that the frame prediction section (109)

¹ See Office Action dated August 19, 2009, pages 2 and 5.

² See Sato, paragraph [0042].

(i.e., the second filter) performs inter-field linear interpolation to generate $\frac{1}{4}$ -precision pixels.³

However, there is no disclosure in Sato of the frame prediction section (109) having a fewer number of taps than Sato's single twofold interpolation filter. Indeed, there is no discussion regarding a number of taps provided in Sato's frame prediction section (109).

Thus, Sato does not disclose or suggest the second filter having a fewer number of taps relative to the first filter, as recited in independent Claim 1.

Please note that the above discussion regarding independent Claim 1 also applies to independent Claims 9 and 10 because these claims recite features analogous to the features recited in Claim 1.

Accordingly, it is respectfully submitted that independent Claims 1, 9, and 10 patentably define over Sato. In addition, for the reasons discussed above regarding the patentability of independent Claims 1, 9, and 10 over Sato, it is respectfully submitted that dependent Claims 2-4, 6, 7, 87-89, 91-94, and 96, which directly or indirectly depend from independent Claims 1, 9, or 10, also patentably define over Sato.

Regarding the rejection of dependent Claim 8 under 35 U.S.C. § 103(a), it is respectfully submitted that Suzuki does not remedy the deficiencies of Sato discussed above. Accordingly, it is respectfully submitted that dependent Claim 8 patentably defines over any combination of Sato and Suzuki.

³ See Sato, paragraph [0044].

Consequently, in light of the above discussion, no further issues are outstanding. The present application is believed to be in condition for formal allowance. An early and favorable action to that effect is, therefore, respectfully requested.

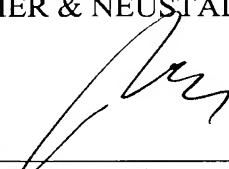
Respectfully submitted,

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